AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (original): Method of determining an eye diagram of a digital signal, wherein by determining an eye width of said eye diagram.

2. (original): Method according to claim 1, wherein by the following steps:

obtaining a first phase difference information corresponding to a first phase difference between said digital signal and a clock signal associated to said digital signal,

obtaining a second phase difference information corresponding to a second phase difference between said digital signal and said clock signal,

determining said eye width based on said first phase difference information and said second phase difference information.

3. (original): Method according to claim 2, wherein said first phase difference is measured between said digital signal and a rising edge of said clock signal, said rising edge corresponding to a start of a bit time, and in that said second phase difference is measured between said digital signal and a falling edge of said clock signal, said falling edge corresponding to an end of said bit time.

4. (currently amended): Method according to ~~claim 2 or 3~~claim 2, wherein by the following steps:

integrating in a first calculation cycle said first phase difference information of N many subsequent bits of said digital signal to obtain a first phase difference voltage, and, after said first calculation cycle,

integrating in a second calculation cycle said second phase difference information of N further subsequent bits of said digital signal to obtain a second phase difference voltage.

5. (original): Method according to claim 4, wherein by determining an eye width voltage based on said first phase difference voltage and on said second phase difference voltage, in particular based on a difference between said first phase difference voltage and said second phase difference voltage, said eye width voltage corresponding to said eye width of said eye diagram.

6. (currently amended): Method according to ~~one of the preceding claims~~claim 1, wherein said digital signal is transmitted via an electrical or/and optical transmission line or via a radio link.

7. (currently amended): Method according to ~~one of the claims 2 to 6~~claim 2, wherein said first phase difference information and/or said second phase difference information are controllably delayed, preferably by a multiple of a/said bit time.

8. (currently amended): Method according to ~~one of the claims 2 to 7~~claim 2, wherein said first phase difference information and/or said second phase difference information and/or a bit value information, which is preferably obtained by a decision gate, and/or a phase difference information selection signal are combined, preferably by means of a combinatoric network according to a predefined scheme, and in that an output of said combinatoric network is integrated in said first and/or said second calculation cycle.

9. (original): Method of controlling an eye width of an eye diagram of a digital signal, comprising a method of determining said eye diagram according to one of the preceding claims and comprising a step of adjusting a phase of said clock signal, said adjustment of said phase of said clock signal depending on said eye width.

10. (original): Method according to claim 9, wherein said eye width is used by computation means that control phase adjustment means, preferably electronic phase adjustment means, for said adjustment.

11. (currently amended): Method according to ~~claim 9 or 10~~claim 9, wherein by using said eye width for controlling transmission control means, such as polarization mode dispersion -mitigation means and the like, which controllably influence electrical and/or optical characteristics of an electrical/optical transmission line that is used for transmitting said digital signal.

12. (currently amended): Method according to ~~one of the claims 9 to 11~~claim 9, wherein by maximizing said eye width.

13. (currently amended): Method according to ~~one of the claims 9 to 12~~claim 9, wherein by deriving time jitter information of said digital signal by means of

analysing a relation between said eye width and a phase difference between said clock signal and said digital signal, and

obtaining time jitter information from a gradient of said eye width with respect to said phase difference and/or from said eye width.

14. (original): Eye monitor for determining an eye diagram of a digital signal, wherein by determining an eye width of said eye diagram.

15. (original): Eye monitor according to claim 14 , comprising:

phase detection means for obtaining a first phase difference information and a second phase difference information between said digital signal and a clock signal associated to said digital signal,

integration means for integrating said first phase difference information and said second phase difference information to obtain a first phase difference voltage and a second phase difference voltage,

computation means for determining an eye width voltage based on said first phase difference voltage and on said second phase difference voltage, in particular based on a difference between said first phase difference voltage and said second phase difference voltage, said eye width voltage corresponding to said eye width of said eye diagram.

16. (original): Eye monitor according to claim 15, further comprising phase adjustment means for adjusting a phase of said clock signal.

17. (currently amended): Receiver for receiving a digital signal, wherein by being capable of performing a method according to ~~one of the claims 1 to 13~~claim 1.

18. (currently amended): Receiver according to claim 17, ~~wherein by~~said receiver comprising an eye monitor ~~according to one of the claims 14 to 16~~for determining an eye diagram of a digital signal by determining an eye width of said eye diagram.